

# 42<sup>nd</sup> Annual Student Research Conference

*Social Work*  
Hispanic Studies  
Criminal Justice  
Agriculture  
*Sociology*  
BIOLOGY  
ENGLISH  
**Communication**  
Math/Computer Science  
FINANCE  
Psychology  
Technology  
NURSING  
Business  
Communication  
Disorders  
*Physical Science*  
Humanities and Social Sciences  
*Education*



Student Success—that's what it's all about!



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Dr. Terry Ervin, Mr. Brad Hamann,  
Dr. Marv Lutnesky, Dr. Andy Nazario,  
Dr. Darron Smith, Dr. Kathleen Wagner, Dr. Juchao Yan



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# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Business

**Student Name:** Lindsey Adcock

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**Faculty Advisor:** Matthew Haney

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**Title:** Hierarchy for Higher Oil: Saudi Arabia's decision making and the impact it has had on the U.S.

### **Abstract:**

The United States' long term ties with OPEC are slowly coming to an end due to the recent competition of market share (Haskins, 2014). This competition has caused a drastic decrease in oil prices which are having negative and positive impacts on economies within OPEC nations and the United States. What are these specific impacts and how can the U.S. improve the long-term outlook? This study will offer an understanding as to what are OPEC regulations and offer explanations as to how foreign oil trade affects the U.S. economy.



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## Poster

**Category:** Business

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**Faculty Advisor:** Dr. Parboteeah

**Title:** Effective Ethics Programs: A Study Of Organizational Ethics In Small & Medium-Sized Companies With And Without Formal Instituted Ethics Programs

### **Abstract:**

The majority of corporations and businesses in operation today have an implemented code of ethics of which all employees are expected to honor. However, the failure of some organizations in exercising an implemented code of ethics are well documented in the literature as seen from the insider trading scandal on Wall Street (Werhane, 1989), Salomon Brothers (Sims and Brinkmann, 2002) and Enron (Lay, Ferrell and Ferrell, 2011). Although the examples provided are large corporations with thousands of employees, smaller organizations are faced with similar ethical challenges (Jenkins, 2006). Currently, there is a gap in available literature pertaining to the mismanagement of ethical programs and ethical decision-making goals. This study will examine managerial and organizational conditions of ethical decision-making processes in these companies and offer managers a stronger understanding and framework for implementing a positive and beneficial ethics program.

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## Poster

**Category:** Communication Disorders

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**Title:** Together and apart: A comparison of twin play interaction

### **Abstract:**

*Purpose:* This study examined how twin pragmatic language use during play differs from twin pragmatic language use while playing independently with non-twin play partners. Specific pragmatic behaviors that characterized the interaction of twins at play in their natural setting were examined. *Hypothesis:* It was hypothesized that twin pragmatic language behaviors while playing together would differ from their pragmatic language behaviors while playing apart from each other and with independent play partners. *Participants:* Two 7-year-old female identical twins and two 6- to 7-year-old unrelated females participated in this study. *Method:* A mixed comparative single-case study design, using ethnographic observational techniques, was used. The chi-square test for independence was used to assess the significance of any identified differences. *Results:* Descriptive data revealed the use of three major pragmatic acts from Searle's Classification system: representative, directive and question (Smiley & Goldstein, 1998). The main qualitative theme that emerged was the use of pragmatic acts to maintain play routines and roles. Quantitative analyses revealed significant differences between exclusive twin interactions versus non-twin interaction in regards to the amount of pragmatic acts needed to negotiate the play scenario.

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## Poster

**Category:** Agriculture

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**Faculty Advisor:** Juchao Yan

**Title:** Growing Microalgae in Dairy Manure Effluents for Sustainable Biofuel Production

### **Abstract:**

The gradual global depletion of fossil reserves has made it imperative for most countries to seek viable alternative sources of energy. Algae, renewable biofuel feedstocks, have grown in importance as green and sustainable fuels. Adapting microalgae cultivation on an Algal Turf Scrubber to our local conditions for maximizing the productivity promises to turn dairy waste into sustainable biofuels in an energy-positive way. We have closely monitored the cultivation broth, including pH, temperature, conductivity, oxidation reduction potential, and nutrients. We have used Soxhlet extraction to extract the lipids, and also used high performance liquid chromatography and gas chromatography-mass spectrometry to characterize the extracts. Our study was conducted in the area of eastern New Mexico. Our major finding is to maximize the productivity of algae which contains the most biofuels for product industrialization

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## Poster

**Category:** Communication Disorders

**Student Name:** Rachael Baker

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**Title:** Learning New Vocabulary: What Works Best?

### **Abstract:**

This study explores how auditory and visual stimuli enhance memory of three parts of Standard English: nouns, verbs, and adjectives. Research about the learning of nouns, verbs, and adjectives using visual and auditory recall is limited. Some argue that using writing as a learning technique leads to better understanding than auditory input (Nelson, Balass, & Perfetti, 2005). Recent literature also suggests that word recall is increased with word concreteness (Begg & Paibio, 1969). This study offered insights about learners and their ability to recognize which category of language is more likely to be remembered. Adults were asked to participate in an online experiment which challenged them to learn three nouns, three verbs, and three adjectives. These words were presented one of three ways: provided in context, provided aurally with their definition, or provided through visual representation. Participants then completed a short post-test to assess their comprehension of each word. Though pictures were the most successful strategy, picture, context, and auditory strategies were significantly equal. As much of the research does suggest, nouns were the easier words to learn, followed by adjective, and then verbs.

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## Poster

**Category:** Communication Disorders

**Student Name:** Janie Balch

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**Title:** I Saw the Sign...or Did I?

### **Abstract:**

Currently in the United States there are 171 colleges and universities that accept coursework in American Sign Language (ASL) as meeting foreign language degree requirements. These ASL courses are typically taught using two distinct methodologies, immersion and simultaneous communication (simcom). Immersion is a teaching methodology that incorporates a variety of visual-gestural modalities (e.g., ASL signs, facial expressions, body language, drawings, pictures, etc.) as part of the teaching process. The major distinction is that voicing is not used during immersion instruction. On the other hand, instruction using simcom incorporates voicing along with all of the above modalities during sign language instruction. Between proponents of the two teaching methodologies, there is an ongoing debate over which methodology contributes the most to student learning. The purpose of this study is to determine which teaching methodology was the most successful in increasing retention of the material learned in an ASL class. A quantitative design was employed in the current study. A post-test only design was utilized in this study so that the participants would not have prior knowledge of the signs presented during the lesson. Thirty-two subjects were recruited for the study using a convenience sample. The results of the study indicated a significant difference between the immersion and simcom teaching methodologies, based on the participants' test scores. On average, the simcom group performed better than the immersion group. In addition, visual fatigue as factor in the learning process was analyzed using descriptive statistics. The results indicated that some participants believed that visual fatigue hindered their learning process, while other participants did not perceive visual fatigue to be a factor.

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## Poster

**Category:** Physical sciences

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**Title:** Relating Nutrient Supply And Removal To The Algal Productivity In An Outdoor Pilot System

### Abstract:

Cultivating algae on nitrogen (N) and phosphorus (P) in dairy manure effluents on the Algal Turf Scrubber (ATS) System at ENMU presents an alternative to the current practice of anaerobic digestion. An alternative to land spreading of manure effluents is mass-cultivation of algae on the N and P present in the wastewater and convert N and P into algal biomass. Our overall project goal is to correlate algal biomass productivity with nutrients level. For effective removal of both N and P, it is important that algae can reflect the N and P concentration in their biomass to the N and P supplied in the wastewater. As we add contaminated water to the pond it's consumed by the algae for their growth. We are also doing the X-ray fluorescence analysis to determine the inorganic composition of the algae. Which is how the algae is utilizing and removing some contaminants from the effluent. Then using the data collected from the DR6000 UV-VIS spectrophotometer we can monitor the consumption of nutrients in the wastewater (Effluent). The concentration of nitrogen is determined easily. While the work to prove the concentration of phosphorus is still going on.

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## Poster

**Category:** Communication Disorders

**Student Name:** Bryan Barnes

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**Title:** Graduate School Admissions And ETS Praxis (NESPA) Scores: Is There A Relationship?

### **Abstract:**

Graduate program admissions in speech-language pathology are highly competitive. As most programs have a restricted capacity for growth, many students are rejected and they must reapply (sometimes for several years) to be admitted. Literature posits speech-language pathology graduate committees are making correct decisions in those who are being accepted; however, little information is available about the success of those students who were eventually admitted following one or more rejections. The purpose of this investigation was to determine if those students who were accepted upon first application received predictably higher scores on the national certification test when compared to those who were accepted into graduate school only after being rejected in prior application cycles. Survey results of recent graduates indicated no significant correlation between the number of times a person applied to graduate school and the lowest score they received on the ETS Praxis (NESPA) exam. This seems to indicate that at least some qualified applicants are being rejected in first round speech-language pathology graduate school admission processes.

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## Poster

**Category:** Communication Disorders

**Student Name:** Caitlin Behm

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**Title:** Focus! How Multitasking Impacts Comprehension

### Abstract:

This research was a quantitative one-shot Quasi-experimental design that evaluated the negative effects of various forms of multitasking. The methods included a 12-minute viewing of a video from ted.com followed by a 10-question comprehension assessment. The participants included 51 people, males and females, ages 18-65. They were video and audio-recorded while viewing the video and assessed afterwards for multitasking behaviors. Multitasking was assessed based on seconds the participants were off task performing an alternate activity while watching the video. Three two-way ANOVAs were run in order to determine significant difference between the participants' time off task when compared to assessment scores. Results indicated there was significant difference between assessment scores and time off task among participants. The results of this study concluded that the longer time spent off task, the lower the assessment scores regardless of age, gender, or parental status.



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## Poster

**Category:** Education

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**Title:** Effects of physical activity on behavior patterns and information retention

### **Abstract:**

This quantitative study examined the effects of physical activity on a child's behavioral patterns and information retention. A total of 29 children aged 3 to 5 years from rural eastern New Mexico were observed. Children's baseline levels of behavioral patterns and information retention rates during large group lesson time were collected. Then physical activity was added to their daily schedule occurring directly prior to large group lesson time. Children's levels of behavioral patterns and information retention rates were collected. The behavioral patterns were collected using a checklist of distracting behaviors including playing, moving, talking, and interrupting. Information retention rates were collected approximately two hours after the lesson was presented by interviewing the children about the lesson. Information gained from this study can be used to analyze and potentially modify pre-school daily schedules to create effective learning environments and optimize each child's learning potential.

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## Poster

**Category:** Communication Disorders

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**Title:** Journey Of Providing Care In Hospice: Perspectives And Experiences Of Speech Language Pathologists

### **Abstract:**

This phenomenological study examined the perspectives and experiences of four speech language pathologists (SLPs) who provide therapy and education to end-of-life patients as well as to their families. Through in-depth interviews with SLPs working in a hospice setting, data was collected for further analysis. The data was then coded and analyzed to answer the research question. Three major themes emerged out of the perspectives and experiences shared by the SLPs: 1) role of the hospice SLP; 2) making of a hospice SLP; 3) personal barriers. The roles of SLP in a hospice setting are multidimensional and often unrecognized with barriers, which prevent them offering best care practices to end-of-life patients. This study provides current and future SLPs with valuable information and experience from hospice SLPs by describing and analyzing the phenomena of SLP hospice care. There is an obligation to recognize and value these important members of a hospice team. There is also the need to educate SLPs in the principles of end of life care. Findings of this study could contribute to a better understanding of what effect their formal education, on-the-job trainings and other professional and personal experiences had in preparing them for work in a hospice setting.

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## Poster

**Category:** Business

**Student Name:** Lori Brunsen

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**Title:** Best Practices In Transitional Housing For Military Veterans In The US

### **Abstract:**

Homelessness among military veterans in the United States is a growing problem. Although communities are beginning to take steps to address the issue, the demand is great whereas the resources are few. One of the most common ways methods of addressing veteran homelessness is through transitional housing, which allows the veterans to have temporary housing while receiving the services they need in order to become self sufficient. The purpose of this study is to identify the different types of transitional housing and the long-term effectiveness of each. This study will look at the success factors of transitional housing in 1) rural areas, 2) low income communities, 3) high alcohol and drug use, 4) close proximity to a military base and 5) long travel distance to veteran's services. Commonalities will be identified to aid in the development of a viable model that can be used as a blueprint to establish long-term success within transitional housing.

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## Poster

**Category:** Communicative Disorders

**Student Name:** Michelle B. Burgess

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**Title:** The Effect of Physical Activity and Whether It Improves Sustained Attention in Individuals with Autism Spectrum Disorder

### **Abstract:**

The aim of this study was to examine the effectiveness of physical activity on attention and alertness in individuals with Autism Spectrum Disorder and whether physical exercise increases their ability to complete table work for a sustained period. There have been numerous studies that have indicated increased attention and alertness when physical activity is introduced prior to therapy. The question to consider is whether extreme sports in the form of climbing will have the same effect. Results of this study indicated that physical exercise in the form of indoor climbing prior to classroom activities/table work improved sustained attention in adults with ASD. These improvements were found to be statistically significant ( $P < .05$ ) with a  $t$  of 2.03 and a critical value of 1.762.

**Key Words:** *Physical Activity, Attention, Alertness, and Autism*

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## Poster

**Category:** Agriculture

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**Title:** Operating cost comparison between greenhouse production and aquaponics systems in educational settings

### **Abstract:**

Aquaponics systems and greenhouses are two of the most widely used growing facilities for geographical areas where environmental factors (such as temperature and rainfall) make food production a challenge. Because aquaponics systems are becoming mainstream, this study was designed to compare the economic feasibility of operating and managing a system that mimics the environment and produce two staple crops in the nation:

The selected aquaponics system selected was a 300 gallon fish tank with crops supported by two attached rafts. The greenhouse space used for comparison matched proximity and preset environmental parameters to the aquaponics system in order to determine a comparable monetary input for resources. The mass (g) of harvested produce and summation of dollars spent in management and operation of equivalent spaces will be analyzed and reported. Also, a qualitative assessment will be completed to report plant health based on observational data collected.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communicative Disorders

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**Title:** A Service Delivery Model Comparison: Effects of a Collaboration and Pull-Out Model on Curricular Vocabulary Skills

### **Abstract:**

Historically, the traditional pull-out service delivery model has consisted of removing students receiving speech and language services from the classroom. Due to the No Child Left Behind Act (2002), there has been a push to include children with disabilities with their non-disabled peers in the classroom. The purpose of this study was to examine the effectiveness of two different service delivery models. A quasi-experimental research design was used to investigate the difference between a traditional pull-out model and collaborative model by measuring vocabulary skills of typically developing first grade students. Each student was given a pretest of 15 curricular vocabulary words. Next, each student was assigned to either a pull-out group or a collaborative group where they received instruction. Then each student was given a posttest. Results from this study found that there was no significant difference in test gains between the two service delivery groups; however, both groups significantly improved vocabulary scores. This seems to imply that both service delivery models were effective in teaching vocabulary words to students but that one model was not more effective than the other.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Business

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**Title:** Yogi Bear Awareness

### **Abstract:**

No one knows exactly when an individual will call 911 for an emergency. Therefore, every fire department has to be ready at a moment's notice. Adding to the problem is the fact that volunteer fire departments do not have enough personnel which causes a shortage in man power. Volunteer firefighters have to be scrambled in this area, which creates a problem in suppressing a fire or responding with multi-vehicles to a scene of incident. Partnering with the Texico Volunteer Fire Department, the day and time an incident occurred was gathered during the year of 2015 and the incident was separated into the following categories: Emergency Medical Services (EMS) or FIRE. After recording the incident, weather data (wind speed and temperature) was noted with the applicable day of incident. After gathering all the data, linear regression will be used to predict the occurrence of incidents based on weather data. The results will allow the department to predict the possibility of an incident occurring in real time with the current weather synopsis. Volunteer firefighters will be alerted if the current weather conditions may lead to a high risk of fire or EMS calls. Also, with this information all incidents will be controlled in the most effective and efficient manner, especially, where a swift response is the difference between life, death, or further damage to property. The results can also be used to warn the public so that they are more cognizant of possible risks of incidents.

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## Poster

**Category:** Communication Disorders

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**Title:** SLP Students Demonstrate Consistent Learning Styles

### Abstract:

Speech pathology is a growing field that is challenged by the limited capacity of universities to train enough qualified graduate students to meet the high need for qualified speech pathology professionals. It is important that students who are accepted into a speech pathology graduate program are appropriate candidates who will eventually contribute to the field and minimize the shortages in the profession. Illustrating the profile of a typical speech pathology student may assist career counselors in orienting the appropriate students to the field and assist educational programs in designing the most appropriate educational experiences for these students. This correlational study investigated the information processing and learning style preferences of 243 speech-language pathology students at the undergraduate (N=102), graduate (N=128), and doctoral level (N=13) using the Kolb Learning Style Inventory (Version 3.1) and the VARK Questionnaire. All categories of the instruments were represented in the student population, but the most common preferences emerged as processing information by experiencing and reflecting, and though kinesthetic learning using two-way ANOVA. These findings suggest a profile for typical speech pathology students and support a potential increase in student satisfaction and learning when a speech pathology graduate program emphasizes applied, experiential learning.



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## Poster

**Category:** Biology

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**Title:** The Coleopteran Fauna Associated With Human Decomposition In Western North Carolina

### **Abstract:**

At a decomposition facility near Cullowhee, North Carolina, a human male body was placed outside and above the ground in a lightly shaded area in order to document decomposition. Different arthropods are known to approach a body at different stages of decomposition, but factors such as temperature and climate make it so that the types of arthropods vary within each region. The goal of this project was to identify the appearance of coleoptera species and to document at which time each species was found during the study. Once a month for four months, pitfall traps placed around the body were emptied for later study. Species belonging to the Carabidae, Dermestidae, Histeridae, Scarabaeidae, Silphidae, and Staphylinidae were collected. These data can potentially aid investigators in determining PMI, or post mortem interval, of bodies found in the western North Carolina area. In addition, understanding of decomposition as a process will be enhanced.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Biological Sciences

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**Title:** Preliminary Assessment Of Hantavirus In Eastern New Mexico Small Mammal Communities

### Abstract:

Hantavirus is an airborne virus that, when contracted, can cause often fatal Hantavirus Pulmonary Syndrome (HPS). It is a zoonotic disease, with people becoming infected directly through contact with infected rodents or indirectly through inhalation of virus particles in dust contaminated with rodent droppings. In 1993, there was an outbreak of the disease in Northwest New Mexico, then known as Sin Nombre Virus (SNV), or nameless virus. Since then, studies of prevalence and distribution of Hantavirus have been conducted in Northwest New Mexico and Arizona, but little is known about its occurrence in Eastern New Mexico. In the Fall 2015, we trapped small mammals on the Eastern New Mexico University Preserve in Portales and the Bottomless Lakes State Park in Roswell, and collected blood samples. Through enzyme-linked immunosorbent assay (ELISA), we tested 103 blood samples across eight rodent species for the presence of antibodies against Hantavirus. Eight samples across five species tested positive for the virus, with overall prevalence of ~8%. Southern Plains Woodrat, *Neotoma micropus*, showed the highest prevalence of ~40%. This study delivers a preliminary assessment of a small mammal community structure and the prevalence of Hantavirus infection among these communities.

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## Poster

**Category:** Communication Disorders

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**Title:** Don't Lose Your Head: Concussion Awareness Among Youths

### Abstract:

It is imperative for all individuals involved with youth sports to understand the serious effects of concussion, a form of Traumatic Brain Injury (TBI). Studies regarding the knowledge levels of student athletes, coaches, and parents have revealed a lack of knowledge in critical areas. The purpose of this study was to investigate public awareness levels of prevention, identification, and recovery of concussive and TBI symptoms among youth and early adolescent football athletes, parents, and coaches after the implementation of a comprehensive awareness program. A total of 71 children and 5 parents from the Silver City and Portales Recreational Centers participated in this experimental study. A pretest questionnaire was used to measure existing knowledge levels of concussion, followed by an information presentation power point about concussion/TBI. A posttest was used to measure individual and group gains. Results indicated a significant difference from pretest to posttest among all participants at both the Silver City and Portales Recreation Centers. Data collected revealed significant improvement across all age groups and experience levels and that all but one participant gained benefit from the implementation of the awareness program. Future studies should be performed longitudinally in order to measure retention levels of participants and include increased levels of participation from parents and coaches.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

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**Title:** Slp Ratings: Are They All The Same?

### **Abstract:**

Speech-language pathologists are often required to rate the intelligibility and comprehensibility of their clients to measure the severity of speech disorders. Intelligibility is defined as how many of a speaker's individual words can be understood using audio only and comprehensibility refers to the total percent of the message which was understood by the listener when visual context was provided. This study intended to investigate the inter-rater reliability for intelligibility levels for SLP students and certified SLPs across the country. Participants completed an anonymous online survey including demographic questions along with three recorded passages each followed by rating questions. Information about the participants was limited to their gender, years of experience, area of experience, and experience with articulation. The recorded passages for this project were collected from three individuals: a child, an individual in grade school, and an adult with apraxia or dysarthria. Two repeated measures ANOVAs were run using averages of years of experience and work location. After investigating the inter-rate reliability of intelligibility levels for SLP students and certified SLPs across the country, scores did not differ between speech-language pathologists across groups. All SLPs were equally competent in intelligibility and comprehensibility ranking, despite their years of experience or where they work.

Key words: speech intelligibility, assess, determine, speech-language pathologist, ratings, severity

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Crystal Dominguez

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**Faculty Advisor:** Dr. Suzanne Swift

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**Title:** What factors are indicative of a high critical thinking score?

### **Abstract:**

The purpose of this study is to discover any correlations between academic, practicum, and employment experiences of individuals enrolled in CDIS Programs and their critical thinking levels. The hypothesis of this research is that there is a positive correlation between students with previous work as an ASLP or SLPA, those with a higher GPA and those who are above the age of 26 and their critical thinking score. Each participant of this research completed a short survey along with the International Critical Thinking Basic Concepts and Understanding Test. Results found that GPA, practicum level, SLPA experience along with articulation and speech and language courses taken were correlated with critical thinking scores. However, individual GPA rankings was the only variable found to yield significant difference between ranking groups.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Humanities and Social Sciences: Anthropology

**Student Name:** Shaleen Eickhoff-Gearhart

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Dr. Marden

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**Title:** The Effects Of Avian Decomposition On Sunflower Vegetation At 20°C

### Abstract:

Have you ever wondered what makes certain plants more vivid than their neighboring plants of the same species? I have, which has lead me to wonder if decomposition can affect not only the soil's micro organismal communities but also the vegetation. Decomposition of avian meat in a clandestine pot grown at a constant ambient temperature of 20°C, will show an increase in chlorophyll content and growth due to the addition of organic nutrients. By exploring how decomposition effects on the vegetation the authorities can then theoretically use my data to help in missing person and mass disaster cases. "The rate of cadaver decomposition can be influenced by both biotic and abiotic factors, which can vary between above and underground situations. Studies which compared above and underground scenarios have been shown that cadaver decomposition rate is slower in the later (Olakanye)." When a cadaver or any meat decomposes is "represents a resource of extremely high quality due to their low C: N (carbon: nitrogen) ratio (J.A. Aitkenhead-Peterson)." By using "google maps" or any other remote oriented satellite to get images of a landscape, in instances such as a mass clandestine grave thousands of descendants may be underneath 2-4 feet of soil; while the vegetation has a darker hue and more growth in both the stem and flowering and taller in length. Having indicators such as this could then help in many instances. Without the knowledge of how vegetation grown in a certain topography there will be known way of solving such cases as these previously stated. In the future I would like to explore developing a database of microbial responses to different species, soil conditions, etc. This could be incredibly useful, and may well be the future of taphonomic research.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Humanities and Social Sciences: Anthropology

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**Title:** Change Through Time At The Eleanor Site (LA 57896)

### Abstract:

Built during Pueblo 1 (AD 750-900) phase, Eleanor Ruin Site was “said” to be an outlier community that was last inhabited before the time of Chaco canyon, NM. From previous studies, there has been documented prosperity and great building projects in the 11th century through the Bonito phase. This was followed by a stasis of sorts that led to additional smaller scale building projects. These projects are thought to begin in the first quarter of the 12th century. Scholars believe this phase was later followed by an abandonment, then remarkably a renewal with increased building, but in a different manner than the 12th century had. This lasted through the 13th century until the final abandonment thereafter. We are generally looking for in this project, evidence that will show us two distinct occupations within the Eleanor Ruin Site community. The evidence we are looking for is temporally distinct assemblages, e.g. ceramics, lithics, and fauna. By uncovering this information, it will give us a better idea of the culture in which the Eleanor Ruin community lived, which will give us a better history for our history as a species in the south west.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Biological science

**Student Name:** Shaleen Eickhoff-Gearhart

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**Faculty Advisor:** Dr. Hanson UNM, Dr.Heagy NMT,EPSCoR

**Title:** The Effects Of Light And Rainwater On The Growth And Metabolism Of N.Salina And G.Sulpuraria

### **Abstract:**

What causes algal production to crash? What are the stressors that attack the algal cells causing them to die and a new batch to take its place? Isn't there a better way to produce bio-algal oil by re harvesting the same batch? If science were to find what the stressors of algal cells are and how these stressors affect the cells, then it may be possible to learn how to avoid having algal production batches crash. Instead scientists may be able to in the future harvest the same batch culture, meaning the algal cells can replicate making the cells/mL denser, which predictably produces more oil yield. Currently Microalgae have a dry mass yield of oil production between 30-65%, which is significantly higher than Rapeseed, Soya, Palm, and Jatropha oil production. The focus of this study is to show an increase in cell density and metabolism in both liquid and encapsulated cultures of N. Salina and G. Sulphuraria. This study will also highlight the differences between how a salt water yellow-green algae and freshwater red algae are affected by the same conditions and stressors. G. sulphuraria is expected to show equal to or greater performance at higher temperatures and changes in pH.



# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Business

**Student Name:** Richard Ferrucci

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**Title:** Your flight was canceled and the website is down: A study about why travel agents are more valuable than online booking engines.

### **Abstract:**

The advance of technology and availability of internet access has made it easier for consumers to use the internet for research and e-commerce. The use of online travel agencies (OTAs) has become very popular to book travel components including air, car and hotel rooms. A travel agent provides human interaction, destination experience and personal service that is not often found with the use of OTAs.

This study analyzes the importance and benefits of using the services of a travel agent in the lifecycle of a vacation compared to that of OTAs. Research indicates that millennials will travel more in a life time than any other group of individuals and main findings indicate that millennials prefer the assistance of a travel agent. The results show that the travel agent is not in jeopardy of extinction and if problems occur, a travel agent is more likely to dedicate the necessary time to ensure a proper resolution for the client.

**Keywords:** travel agent; online travel agency; millennials; vacations; trip planning

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

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**Faculty Advisor:** Dr. Suzanne Swift

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**Title:** Reading vs. "Skimming": Does it Make a Difference?

### **Abstract:**

This paper will explore the relationship between reading comprehension and working memory. Research presents information about how important cognitive processes and working memory are for reading comprehension at different levels. The articles used vary in background knowledge and standardized norms determining specific levels of comprehension. The purpose of this study is to determine if significant difference in performance exists. One subgroup of students is presented a detailed paragraph and questions, while the other subgroup of students is presented the first and last sentence of the paragraph and the same questions. Students currently working on their undergraduate degree and students from the ages of fifteen to seventeen will be randomly assigned to each subgroup. The first subgroup received a full page excerpt while the other group received the first and last sentence of the page. The number of questions answered correctly and incorrectly within each passage was compared using a t-Test for Independent Measures. Findings suggest that there is no significant difference between subjects reading an entire passage versus the first and last sentences of each paragraph within the passage in regards to percentage of correct response of comprehensive questions.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Felicia Fredd

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**Title:** Persons Who Clutter: Perceptions of Listener Reactions

### Abstract:

This qualitative/phenomenological research presents the experiences of persons who clutter (PWC): specifically, how listeners respond to their conversational speech and how this has shaped their communication perspectives. Using in-depth personal interviews, information was gathered about parent and listener reactions, comments, etc. The rationale for the study was that increased knowledge of how cluttering is perceived by a range of communicative partners may help contribute to 1) the development of meaningful descriptive definitions, 2) understanding of obstacles to identification, and 3) increasing general visibility and interest in the disorder. Patterns of response suggested specific opportunities for improving identification/outreach efforts and intervention avenues across the lifespan.

**Key Words:** *qualitative, cluttering, stuttering, diagnosis, identification, fluency, language*

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Nursing

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**Title:** Scholarly Inquiry Review Of Pedagogical Strategies For A Multigenerational Workforce

### **Abstract:**

This scholarly inquiry review explores the concept of creating evidence-based pedagogical strategies for continuing education of a multigenerational nursing workforce. This is the first time in history four generations have been side-by-side in the workforce. Each generation of nurses brings its own sets of value, communications styles, nursing educational focus, and challenges. The nurse educator must be astute in recognizing these differences and create a tailored education plan to meet each generation's needs. This translates to using different styles and learning techniques preferred by each generation. Some examples offered in this session will include at-the-elbow technological education for the Silent Generation, collaborative group work for Baby Boomers, independent assignments for Generational X, and incorporation of social media for Millennials. Regardless of the method chosen for each cohort, the key to success is the ability to be flexible to ensure all nurses are engaged in the learning process. Failure to strategize based on generational needs could lead staff dissatisfaction and frustration resulting in turnover or attrition.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Nursing

**Student Name:** Rachael Frija

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**Title:** Efficacy Of Modified Early Warning Systems (Mews) In The Skilled Nursing Setting In Predicting Patient Deterioration

### **Abstract:**

Modified Early Warning Systems (MEWS) scoring tools are designed to help identify patients at risk for rapid deterioration, and serves to trigger the nurse to apply early intervention usually accomplished by activating the Medical Evaluation Team (MET). The MEWS scoring tool utilized in the Presbyterian Hospital System is a four point scoring system measured on a scale of zero to three as it applies to six different measures. These measures are temperature, heart rate, systolic blood pressure, respiratory rate, oxygen requirements, and level of consciousness. Highest potential score is eighteen. Scores greater than or equal to four require activation of the MET for further evaluation. Scores greater than or equal to seven require notification of the physician and immediate intervention. The patient population of the sub-acute skilled nursing setting has different characteristics than those in the acute care hospital setting, such as extended inpatient stays and infrequent vital sign assessments. Published data supporting the validity and reliability of this tool in the skilled nursing setting has not been established. This retrospective chart review seeks to determine if MEWS is an effective tool in identifying patients at risk for rapid deterioration in the skilled nursing setting. As a secondary aim, the correlation significance of the MEWS score as it relates to severity of patient outcome is also explored. The primary outcomes to be evaluated are Medical Evaluation Team (MET) calls, emergency department transfer, and cardiopulmonary arrest. The study will analyze the data via Pearson correlation coefficient, coefficient of determination and P-value of significance.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Gina Fuentes

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**Title:** The Degree to Which Para-educators are Trained: Implications for Special Needs Populations

### **Abstract:**

The increasing number of children on Individual Education Programs (IEPs) who qualify for services have caused many districts to employ the use of para-educators to aid classroom teachers and resource specialists to provide support to special education students. Para-educators have an important role providing instruction in academics, behavior, and emotional supports. Sometimes, the line that divides expectations of para-educators gets blurred and they end up providing services that are out of their realm of expertise. This research questioned the extent to which para-educators are trained for the services they provided. 100 para-educators in 3 different states completed a survey using both quantitative/qualitative methods, exploring the preparedness and confidence that participants felt in their positions, while also assessing if school districts provided trainings necessary for para-educator success. Findings emphasized a need for more training and revealed that many districts were using supervision of para-educators as a replacement for formal training.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Fanny Garza

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**Faculty Advisor:** Dr. Suzanne Swift

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**Title:** SQ4R Study Method Improves Reading/Listening Comprehension in Fourth Grade Students

### **Abstract:**

This study examined the impact of the Survey-Question-Read-Recite-wRite-Review method (SQ4R) on reading/listening comprehension in fourth grade students. A pretest/posttest experimental design was used with a total of 26 fourth grade students. Students were randomly assigned to either an experimental group (n = 13) or a control group (n = 13). Following initial data collection, students in the experimental group received SQ4R instruction and formulated questions based on Bloom's taxonomy. A t-test for repeated measures revealed significant difference between pretest and posttest in the experimental group ( $t(12) = -3.91, p < .05$ ); however, there was no significant difference between pretest and posttest in the control group ( $t(12) = 1.48, p > .05$ ). Students often used all six "wh" questions from Bloom's taxonomy while the control group did not use "wh" questions. These results indicate the effectiveness of using SQ4R as a study technique to improve reading comprehension and increase use of higher thinking questions.

*Keywords:* SQ4R, NAEP, reading comprehension, PIAAC, Bloom's Taxonomy, RTL, PAARC

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Business

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**Faculty Advisor:** Matthew Haney

**Title:** How Big Should The Wall Be?

### **Abstract:**

Who is ready to vote? Presidential elections have come again and one of the major issues for which presidential candidates, as well as voters, prepare for is immigration. Since the beginning of history, immigration has played a major role around the world. Up to this point, the role of immigration has brought various disputes and controversies throughout the nation and it is necessary for law implementation to take place. With this coming 2016 presidential election, it is necessary to take all important facts into consideration in order to attain a plan that will help the country unite as a whole. Based upon similarities within the different proposals offered, a feasible immigration plan can be acquired. Currently, through literature, immigration history can help recall how immigration was dealt with during the country's start. Current immigration plans, laws, and ideas set public and which are known worldwide also contribute in finding solutions. What is the next step the United States will take regarding immigration? Through this research, a feasible immigration plan that can successfully be implemented will be acquired through similarity acquisition of candidate proposals and literature provided.



# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Physical Sciences

**Student Name:** Adrian Gonzalez

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**Title:** Chemical Analysis of Caliche by X-ray Fluorescence

### Abstract:

Caliche is a residual soil that is calcium carbonate rich and used in many industrial applications such as cement, filtering of sugar, glass, electronics, and as well as agricultural uses. With caliche being a resource for many applications, a chemical analysis by X-ray fluorescence spectrometry can give us a deeper understanding of this resource and how the chemistry varies. Caliche is found in many locations around eastern New Mexico and western/southern Texas. Samples were collected outside Portales, "caprock" of eastern New Mexico, and from west Texas. The study will tell us how the chemistry varies of the caliche varies from locations across the region. The samples were analyzed for Na<sub>2</sub>O, MgO, Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>, P<sub>2</sub>O<sub>5</sub>, SO<sub>3</sub>, K<sub>2</sub>O, CaO, MnO, Fe<sub>2</sub>O<sub>3</sub>, SrO and I. The results showed that there was not much a significant difference between samples. The next step will be to analyze additional samples and look for correlations of element concentration and location.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Education

**Student Name:** Amanda Gonzales

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**Faculty Advisor:** Dawn Browder PH. D

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**Title:** Cognitive Ability in Young Children

### Abstract:

"What children learn does not follow as an automatic result from what is taught, rather, it is in large part due to the children's own doing, as a consequence of their activities and our resources." Loris Malaguzzi. The purpose of this study is to examine the effect of different teaching methods on the cognitive recall of pre-school aged children. In addition, the children will be learning about the initiative, "Reduce, Reuse & Recycle." The children enrolled at the Child Development Center will be divided into two groups- both groups will experience the same large group lesson plan. However, they will experience differing small group lesson plans. In the first group, the teacher will use realistic models for all small group activities. With the second group, the teacher will use more creative (fantasy) models. For example, after the children learn about worms being decomposers, they will create their own worm. The teacher will use a realistic model for the first group and a creative model for the second group. Prior to exposure to large and small group lesson plans, the children will be asked a series of questions concerning the theme which consists of the following topics: Reduce, Reuse & Recycle, Worms, and Composting. Furthermore, the children will then be exposed to the designated models. At the end of the learning unit, the children will be asked the same series of questions to measure their cognitive recall ability. This pilot study includes 14 students enrolled in a southwestern region child development center. Within this group of children, 50% were female and 50% were male, their ages range from two years and ten months to four years old. According to Gardner's Multiple Intelligence Theory, he states that not all children learn the same. The cognitive processes within a group of children might be quite diverse. This pilot study will only consist of one week of lessons with the children, as the real study will go on for eight weeks of lessons.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Arianna Haro

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**Title:** Differences In Auditory Processing in Bilingual Speakers: Using The Spanish And English Test Of Auditory Processing Skills (TAPS-3)

### **Abstract:**

The limited amount of research in the assessment of auditory processing in Spanish-English bilingual populations has hindered possible clinical procedures, models of practice, and diagnostic purposes. The purpose of this study is to determine whether students with Spanish as their first language (SP1) score higher in auditory processing skills than those who learned Spanish as a second language (EN1), given the Test of Auditory Processing Skills-3 (TAPS) in both English and Spanish. The study also aimed to determine male versus female performance across tests and to determine language preference. Sixty Spanish bilinguals were administered the TAPS-3 in English and the TAPS-3: SBE one week later to examine differences in auditory processing between groups and across tests. Results demonstrated higher performance rates on the TAPS-3: SBE version between SP1 speakers and EN1 speakers. Results also found that male participants performed significantly higher than female participants and all had an overall English preference. Although scores did not demonstrate significant differences across all areas measured, warrant the need for assessment in both languages in bilingual speakers.

*Key Words:* TAPS-3, auditory processing skills, Spanish-English, bilinguals

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Humanities and Social Sciences: Anthropology

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**Faculty Advisor:** Dr. Kerriann Marden

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**Title:** The Effects Of Water Drainage On Bones

### Abstract:

Taphonomic processes affect the fields of archaeology and forensic science. Understanding how these processes work is vital to interpreting the observable effects on buried artifacts including bone. Abundant research exists on the effects on bone of freshwater pH, saltwater, prolonged submersion, temperature, water movement, preservation rates of juvenile versus adult bone, and ambient humidity levels. However, there seems to be a gap in the research done to date that excludes the effects of water drainage on bone samples. To fill in the unknown variables in this area of taphonomy, this study was created around the research question "Which environment will create the most noticeable macroscopic and microscopic effects on the metapodial bones of a pig and human teeth—dry, slow drainage, fast drainage, or waterlogged with no drainage?" Initial steps toward this study included the maceration and drying of six pigs' feet, flow trials of the separator funnels to be used in the study, the collection of dental sample donations from a local dentist, experiments in dilution quantities of Hydrochloric Acid (HCl) and Sodium Hydroxide (NaOH) in distilled water to achieve the desired pH levels, and background research into other experiments and accepted theories in taphonomy. Ten pig metapodial bones and ten teeth were photographed at the macroscopic and microscopic level at recorded sites on the samples to be compared with photos of the samples taken at the same locations and magnification levels after the completion of the experiment. To expand on the research question, the study tested the effect of two rates of water drainage of three solutions at approximate pH levels 4, 7, and 10, using solutions of HCl, distilled water, and NaOH respectively.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Mark Higginson

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**Title:** Two Potential Cochlear Implant Treatments

### **Abstract:**

Auditory rehabilitation is a vital factor in cochlear implant users' development of aural-verbal communication. Effective auditory therapy must be developed based on accurate research. The present research investigates how variation in the acoustic properties of treatment stimuli affects comprehension. Stimuli consisted of audio recordings processed through cochlear implant simulation software. 90 normal-hearing participants ages 16;2-39;8 were matched into 3 groups, each consisting of 15 males and 15 females. Each group took a pretest and posttest to measure comprehension of stimuli. Group C, the control group, received no training between taking the pretest and posttest. Before taking the posttest, Groups L and H were exposed to audio recordings coupled with subtitles to allow the listeners to practice associating the degraded audio with familiar speech sounds. Group L (for "low variety") trained to 24 stimuli (12 single words and 12 sentences presented a total of 4 times, twice without subtitles and twice with subtitles) that were generated by only 2 voice models. This low variety in voice models created homogeneous acoustic characteristics across the stimuli. Group H (for "high variety") was exposed to the same number of stimuli, identical in content and presentation order to Group L's, but with a higher variety in acoustic characteristics (generated by 12 different voice models). There was no significant difference among the pretest scores of all three groups. All three groups performed significantly better on the posttest than on the pretest. Groups L and H each obtained significantly higher gainscores than did group C.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Amber Holliday

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**Title:** This is Only a Test! How Test Anxiety Affects Academic Performance

### Abstract:

Test anxiety impact students on a daily basis by limiting their full potential to perform well academically. Higher levels of test anxiety can be attributed to time constraints during testing, low self-efficacy and will lead to scoring poorly on tests. The purpose of this study was to determine what effect test anxiety levels have on testing performance and its impact on academic performance by assessing test anxiety, time constraints, quiz grades and year in school. Sixty-six CDIS undergraduate and graduate students enrolled in on-campus CDIS courses participated in the study. This quantitative, experimental design used a pre-test and post-test across two treatments. The Westside Test Anxiety Scale was used to determine test anxiety levels before and after students completed a quiz based on a short lecture given during class. Students participated in two treatments, the first being no time constraint for the quiz and the second treatment being a ten minute timed quiz. Data was analyzed using a repeated measure t-test and an independent measures 2-way ANOVA. Results indicated that test anxiety levels were not impacted by time constraints or year in school. Time constraints were also found to not have an effect on quiz scores. These findings suggest that regardless of how much time is allotted for a test and how far a student is in school, test anxiety has no effect on one's academic performance.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Yasmine Holmes

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**Faculty Advisor:** Dr. Suzanne Swift

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**Title:** Are Post-Graduate Students Ready for the Real World?

### **Abstract:**

Graduate students in Speech-Language Pathology are required to show competence in a variety of skills prior to graduation. These skill requirements are put in place to ensure programs and licensure/certification agencies that students are able to competently work in their chosen field; but there is little research available which indicates the extent to which the graduate themselves feel prepared to practice. Do graduates feel ready to deliver speech-language pathology services? The purpose of this study is to identify the self-perceived level of preparedness of recent American Speech and Hearing Association (ASHA) certified graduates. Additionally, this study aims to determine what factors contributed to post-graduate perceptions of preparedness. An online survey was given to individuals who graduated between 2010 and 2015. Results found that a combination of academic and practicum experience lead to respondents feeling more prepared in an area as opposed to only receiving practicum experience or only receiving academic experience.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Liberal Arts and Sciences: Religion and Anthropology

**Student Name:** Jill Hurley

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**Faculty Advisor:** Shirley Rollinson

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**Title:** The Gift: An Anthropological Look At Religion

### **Abstract:**

In 1925, Marcel Mauss, a french sociologist, wrote a book called "The Gift." Since then, his theories on gift giving and reciprocity have greatly impacted the social sciences. As one of the founding theorists of anthropology, I am going to apply his theory of gift giving to the subject of religion, specifically Christianity. Through this we will see that, the relationship between humanity and deities is based off of the same standards of reciprocity found in cultures around the world.



# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Danielle Jackovitz

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**Faculty Advisor:** Dr. Theresa Worthington

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**Title:** Prevalence Of TBI In College Sports

### **Abstract:**

Traumatic brain injury (TBI) is a common health concern that affects thousands of athletes each year (Schatz, et al., 2006). This survey research study investigated the prevalence of traumatic brain injury and subsequent treatment among university football and soccer athletes in comparison to intramural team athletes enrolled in two-year or four-year colleges. Information was also gathered about the athletes' head injury prevention training and knowledge of concussion. The study included 88 male and female college students who played soccer or football at the time of their participation. When responses from university team athletes and college intramural team athletes were compared, a significant difference between the numbers of concussions sustained among university football players in comparison to intramural football players was found. No similar difference was found between the university soccer players and the intramural soccer players. A significant difference between assessment and treatment for symptoms of concussion among university athletes in comparison to intramural athletes was found. Participants responded with 99% accuracy to true-false statements related to basic facts about concussions.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Katie Jensen

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**Faculty Advisor:** Dwayne Wilkerson

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**Title:** Do Intelligibility Rating Discrepancies Exist Between Trained and Untrained Listeners?

### **Abstract:**

The purpose of this study was to determine if consistent discrepancies exist between trained listeners and untrained listeners when judging speech intelligibility. One hundred and twenty-six participants completed a survey that required them to listen to three different speech samples in order to make impressionistic intelligibility judgments about percentage of intelligibility, speech comprehensibility, and level of severity ranging from within normal limits to severe. In addition, the participants were required to identify a specific factor that significantly impacted intelligibility and determine if therapy was warranted for each client. The speech samples included one from a client diagnosed with dysarthria, a client diagnosed with a phonological processing disorder, and a client diagnosed with apraxia of speech. The participant surveys were divided into two groups, trained and untrained listeners. The trained listeners group included graduate students enrolled in a speech-language pathology program and speech-language pathologists currently working in the field. The untrained listeners did not have any speech/language background or linguistic training. The results indicated that there were no significant differences between trained listeners and untrained listeners when assigning impressionistic intelligibility percentages to the disordered speech samples; however, there were discrepancies between trained and untrained listeners when determining the speech comprehensibility, severity of the speech disorder, and the factor that impacted the speech intelligibility the most. Overall, the trained listeners rated the speech disorders as being more severe than the untrained group.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** DuAnn Jones

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**Title:** Phonological Awareness – Is Music Really the Key?

### Abstract:

**Purpose:** The purpose of this research was to conduct a study of preschool children aged 3 to 5 years in order to observe and compare the effects of providing phonological awareness instruction with and without the accompaniment of music on the exhibited phonological awareness skills of preschool children. **Method:** This research study employed a quantitative nonrandomized comparative three-group pretest-posttest design. Thirty male and female children aged 3 to 5 years enrolled in daycare were chosen by a convenience sample. Participants were evenly divided based on age and gender into two experimental groups and one control group. Participants were given a pre-test of the *Test of Preschool Early Literacy (TOPEL)* before the beginning of the treatment phase to assess each child's phonological awareness skills. During the treatment phase, the children in the experimental groups were exposed to 10 minutes of phonological awareness treatment with or without music for five days per week across 2 consecutive weeks. During this period, the control group was exposed to normal daily daycare curriculum, which might or might not include phonological awareness tasks with or without music. After treatment, the *TOPEL* was re-administered to all three groups to compare groups and determine if phonological awareness skills had increased. A Paired t-test was used to compare pre- and post-test scores for all three groups. **Results:** Based on pre- and post-test score comparisons all three groups exhibited improved performance on phonological awareness tasks. At post-test preschoolers in the experimental groups outperformed the preschoolers in the control group. **Conclusion:** This study supports the assertion that phonological awareness training in the preschool population leads to improved phonological awareness skills.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Science: Physical

**Student Name:** Krista Jones

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**Faculty Advisor:** Dr. William Cooper

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**Title:** Inhibition of 3 $\alpha$ -Hydroxysteroid Dehydrogenase

### **Abstract:**

3 $\alpha$ -hydroxysteroid dehydrogenase is an essential enzyme in human steroid hormone metabolism. This enzyme has wide reaching endocrine affects, as its isoenzymes are present in most areas of the body. Unfortunately, many commonly used agricultural and industrial products (pesticides, plasticizers, antimicrobial, flame-retardants) inhibit this enzyme. These endocrine disrupting chemicals (EDCs) are often released to the public before their deleterious effects are known. To prevent this, a simple evaluating test needs to be implimented. To explore this, 3 $\alpha$ -hydroxysteroid dehydrogenase from *Pseudomonas testosteroni* will be assessed kinetically to determine its baseline behavior. After this, its action in the presence of a known inhibitor will be considered.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Megan Jones

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**Title:** Communicating Partners Prefer Synthesized Speech Over Picture Communication

### **Abstract:**

This research project compared the use of synthesized speech to the implementation of a picture exchange system to measure possible differences in the abilities of communication partners to understand the communicative intent of a person based on the augmentative and alternative communication modality used. Fifty-two adults aged 18 years to 89 participated in this study. All participants were presented with twelve different sentences. Each sentence was followed by a comprehension question to assess the intelligibility of the stimulus. Six of the sentences were presented using synthesized speech, and six sentences were presented with pictures. An analysis of the participants' ability to accurately state the presented sentences and to perceived the meaning was completed to provide information regarding if one modality is associated with stronger intelligibility for the general population. Results indicated that a significant difference was present between interpretation of synthesized speech and graphic communication. Results may support the idea that synthesized speech is a better form of communication based on the communicating partners ability to understand the intended communication attempt.

**Key Words:** picture exchange system, synthesized speech, augmentative and alternative communication (AAC)

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Physical Science

**Student Name:** Erin Justice

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**Faculty Advisor:** Dr. Constantopoulos

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**Title:** Comparative Analysis Of Local Man-Made Lakes

### Abstract:

The focus of this study is to look at the chemical components in three lakes in Clovis NM, located at Greene Acres Park, Ned Houk Park, and Dennis Chavez Park. These lakes are the focus of this study because of their varied locations. Greene Acres Park is next to a busy main road, Dennis Chavez Park is located near a neighborhood and Ned Houk Park is located approximately 15 miles from Clovis. In this study I will be testing the differences between man-made lakes in rural, semirural and urban areas. I want to see if the locations of these man-made lakes affects the pH, manganese, nitrate, nitrite and phosphate in these three lakes. These levels will then be compared against the EPA limits. Greene Acres is aerated and stocked with fish for recreational use, Ned Houk is also stocked for recreational use. Dennis Chavez Lake is stagnant runoff. The collection of these samples will be done by using a six foot dipper to reach a couple feet off the edge of the lake, five samples will be taken from about a foot or two under the surface of the lakes. These samples will be stored in precleaned 125 ml bottles so that no chemical reactions occur with the container that might skew the data. Once the water is collected the pH will be tested and recorded for each sample. The sample will be stored in a cooler and taken to the lab. At the lab the water will be tested with the Hach DR 6000 UV VIS spectrophotometer. The water will be tested for manganese, nitrate, nitrite, and phosphate. This Process will be repeated for each lake. The components found in each lake will then be compared to one another and against EPA standards.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Nelida Lara

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**Faculty Advisor:** Dr. Suzanne Swift

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**Title:** I Think I Can, I Think I Can, I Think I Can: The Effects Of Authoritative and Permissive Teaching on 3<sup>rd</sup> and 6<sup>th</sup> grade Student's Self-Efficacy

### Abstract:

The purpose of this research project is to analyze the effects of authoritative and permissive teaching styles on the self-efficacy of 3<sup>rd</sup> and 6<sup>th</sup> grade elementary school students. For this research project, authoritarian teaching style was defined as process oriented and the students were guided through the project. In the permissive teaching style, the students were given a task and then were left and finished the exercise on their own. This study consisted of four groups: 3<sup>rd</sup> grade Group A (n= 42), 6<sup>th</sup> grade Group A (n=35), 3<sup>rd</sup> Grade Group B (n=37), and 6<sup>th</sup> Grade Group B (n=30). The first phase of the project involved teaching with an authoritative teaching style for the first group of 3<sup>rd</sup> and 6<sup>th</sup> graders. The second group of 3<sup>rd</sup> and 6<sup>th</sup> graders received the permissive teaching style. After two weeks, the second group of 3<sup>rd</sup> and 6<sup>th</sup> graders was taught with the authoritative teaching style and the first group received the permissive teaching style. After each lesson, all groups were given the Self-Efficacy Questionnaire for Children (SEQ-C). The survey consisted of eight questions and was rated on a Likert scale. A two-way ANOVA was performed and the results indicated there was significant difference across all four groups. Furthermore, significant difference was found between grade levels and teaching styles.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Agriculture

**Student Name:** Taylor Lee

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**Faculty Advisor:** Dr. Matthew Haney

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**Title:** The Integration of Decision Support Systems in Agriculture

### **Abstract:**

As the need to stop environmental mortification becomes more prevalent and the increasing pressure for food security and sustainability; agriculturalists have begun to focus their efforts towards the efficient use of farm resources. Despite the recorded success of precision agriculture (PA) in conjunction with a decision support system (DSS), the practice has failed to become standard among many farming operations. Efficient DSSs include precision agricultural technologies (PATs) such as crop yield monitors, satellite imagery, and global positioning systems (GPS). The use of PATs has revolutionized the way agriculturalists make business decisions. These management tools facilitate in protecting farmers/ranchers from risks associated with production, economics and finance, and the environment. In the past, there were many challenges associated with the complexity and usability of these management tools. However, agronomists who have chosen to incorporate PATs into their practice have been able to develop an efficient decision management system that promotes whole farm management. This study investigates the limited adoption of PATs and offers explanations as to why some agriculturalists have chosen to ignore these tools while others have not. This study will examine the specific variables that deter the implementation of a DSS and offer solutions to promote the adaptation and long-term use implications of a successful DSS.

**Keywords:** precision agriculture, decision support system, precision agricultural technologies, DSS, PAT, farming, management system, sustainability, food security



# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Psychology

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**Faculty Advisor:** Leslie Gill

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**Title:** Meditate To Create: Mindful Meditation And Its Influence On Creative Cognition

### **Abstract:**

The purpose of this research is to determine if mindful meditation has an effect on creative cognition. Looking at the relationship between mindfulness and abstract cognitive processes could aid in understanding how to improve resourceful mental capacities. Previous research supports that mindfulness increases awareness in the aspects of the self and expansive thinking. This study intends to simulate past research to compare results of when mindfulness is and is not applied to a creativity test in the form of word games. Repeated measures will be exercised, in which participants will be exposed to two different audio recordings for meditation purposes. One recording will contain a guided mindful recording, while the other contains nature sounds. After the first recording is played, participants will be asked to complete the creativity test. Then the other recording will be presented and participants redo the creativity test. Results collected will be to determine if there is a statistical significance when mindfulness is introduced.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Sciences: Biological

**Student Name:** Paige Marquez

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**Faculty Advisor:** Dr. Kerriann Marden

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**Title:** Validation Study On The Influence Of Insects On Decomposition Rate In Buried And Surface Remains

### **Abstract:**

The purpose of this study is to replicate a study conducted in England to determine whether insects influence the rate of soft tissue decomposition more than any other variable. The original study (Simmons and Cross, 2010) found that insects had the greatest impact on decomposition rate, but other research has called these results into question. I will follow the same methodological protocol, using a total of eight rabbits as experimental specimens: two will be buried deeply enough to prevent insect access; two will be buried shallowly in order to allow insect access; two will be placed on the surface in containers to prevent insect access; and the final two will be left on the surface with nothing to inhibit insect access. I will observe the specimens daily for a span of 28 days. Data collection will include photographing each specimen daily, recording the type and number of insects present; qualitative descriptions of condition (color, texture, surface characteristics); and employing both Total Body Score (TBS) and Accumulated Degree Days (ADD) methods to assess the degree of decomposition of each specimen daily. ADD temperature data will be accessed via the weather station on campus. Results will then be compared to those of the original study, and any discrepancies in our results will be considered on both a regional and methodological level.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communicative disorders

**Student Name:** Kyle Martin

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**Faculty Advisor:** Dr. Suzanne Swift

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**Title:** Does Sensory Integration Treatment make a difference in articulation therapy?

### **Abstract:**

The use of sensory integration techniques in children with autism is a common practice in occupational therapy; however, examining the effects of sensory integration techniques in speech therapy is severely limited. This study examines the effects of integrating sensory techniques in conjunction with motor based approaches to improve the efficacy of articulation in a 10 year old child diagnosed with autism, Sensory Integration Disorder (SID), Oppositional Defiance Disorder (ODD), speech disorders, and ADHD. Children with these types of Diagnoses may suffer from a range of emotional, social, and educational problems. The research design is a single-subject quantitative experimental A-B-C-B-C-B-C-A alternation therapy/therapy +experimental treatment design targeting phonemes /r/ and /æ/. All data collected was analyzed and expressed in a Repeated Measures Analysis of Variance (ANOVA). The result of the ANOVA indicated a significant difference between pre and post-test measures across words, phrases, sentences and conversation. After implementing the program designed that includes both articulation therapy and sensory treatment; however, there was no significant difference found between articulation therapy integrating sensory treatment and articulation therapy minus sensory treatment.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Physical Science

**Student Name:** Amber Martinez

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**Faculty Advisor:** Dr. Constantopoulos

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**Title:** The Effectiveness Of Bone Char For The Removal Of Fluoride

### **Abstract:**

The purpose of this study is to determine the effectiveness of bone char for the removal of fluoride from water. Fluoride can be found naturally in water but it is commonly added to water to prevent tooth decay. Studies have found that high amounts of fluoride could have damaging effects on public health. Bone char is charcoal created from cow bones and has been found to be useful in the removal of many metals and nonmetal contaminants found in our water supplies. Bone char is also inexpensive, easy to make, and can be found in abundance. To test the effectiveness of bone char for the removal of fluoride a Chromaflex chromatography column was packed with 260 ml of 20x60 mesh bone char. Portales tap water was used to test the effectiveness of the bone char in removing fluoride. Before passing through the column 1000 ml the water was analyzed using a Hach Combination Fluoride Electrode. The water contained 1.9 mg/l of fluoride. The water was then run through the bone char column and tested again. After passing through the column the water contained 0.04 mg/l of fluoride. Only 2% of the original fluoride content remained in the water. From this we can conclude that bone char is very effective in the removal of fluoride. The next question we want to answer is how much water can be passed through the bone char until the effectiveness begins to decrease. To test this we will continue to pass 1000 ml of the tap water through the column testing the fluoride content until the fluoride content of the water is at 1.0 mg/l. Along with fluoride we will also run several other tests for the effective removal of chlorine and phosphorous using other types of charcoal. Results of this study are significant because they can help areas with high fluoride or other contaminant content have an inexpensive, safe and effective way to produce clean drinking water.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Ashley McBroom

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**Faculty Advisor:** Dr. Suzanne Swift

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**Title:** I Already Forgot.

### **Abstract:**

Studying takes many forms: reading, writing, listening, and verbal repetition are just a few. Discovering the most effective method of retention is a common concern when it comes to students. The purpose of this study is to investigate the effectiveness of different short-term memory techniques on correct recall. 120 participants between the ages of 18-30 were pretested for memory recall. Participants were randomly placed into one of four study technique groups; reading, writing, creative drawing/story, or repeating. Subjects were given lists to remember and required to apply their assigned study technique. A two-way ANOVA for independent samples was used and based on the results, a Tukey's HSD was applied to find significant difference. A t-test for correlated samples was calculated within groups and a t-test for independent samples was used to compare gender. Significant difference was found in pre-test vs. post-test results of the writing, reading, and verbally repeating groups. No significant difference was found when comparing males vs females.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Beth McDonald

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**Faculty Advisor:** Dr. Suzanne Swift

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**Title:** They Posted Whaaat? Social media policy at graduate schools and online behavior of SLP and Audiology students

### Abstract:

Content on Facebook and other social networking sites varies from one extreme to the other. There is widespread usage of social networking sites among students in professional programs, but current research is limited regarding whether the postings have become problematic when compared to the ASHA code of ethics and to FERPA/HIPAA requirements for professionalism and confidentiality. This study is proposed to investigate whether online posting of unprofessional content by Speech Language Pathology and Audiology Graduate Students is an issue in graduate schools across the US. This study investigated if universities have policy in place regarding content of social media postings. A 10 item survey was developed and sent to clinical directors and ASHA program directors at graduate schools to identify if any policy is in place regarding content on social networking sites. A significant difference was not found between participants with incidents at their institutions that have a program policy covering social media posting and those that do not have such policy. Implications for students and educators regarding inappropriate content are discussed.

**Keywords:** social media content, online posting policy, cdis facebook policy, cdis social media policy

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Business

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**Faculty Advisor:** Dr. Matthew Haney

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**Title:** More Than Just A Statistic

### **Abstract:**

Teens are aging out of foster care and moving into a world for which they are underprepared for. The likelihood of these teens to pursue a higher education is low. They lack the development of life skills while they are in a state foster program, which contributes to the high risks of facing financial instability. In addition to coming face to face with the challenges associated with the developmental stage, they are at risk of having to make this transition without emotional and financial support which was allotted to them while in foster care. The available research regarding the disadvantages that teens face after foster care is up to date, which this study will reflect on secondary research that has been done in order to provide a better understanding of what these teens face after aging out of foster care, and how one can help by generating thoughtful idea from this research. This research will offer a better understanding of what a teen faces as they try to reach the goal of self-sufficiency with the immediate transition into adulthood without any resources or guidance.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Evelyn Moore

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**Faculty Advisor:** Dr. Suzanne Swift

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**Title:** Why are you here? Retention, Satisfaction and Calling of Speech-Language Pathologists

### **Abstract:**

This qualitative study explores the perspectives of Speech-Language Pathologists on their field, what drew them in, why they stay and improvements they think can be made. Studies have been done in nursing and geology, but not communication disorders. A two part survey was sent to contact of the researcher. Individuals could then refer the survey to others as well as opt for a more in-depth interview with the researcher. The survey consisted of seven short essay questions, five demographic questions and two satisfaction questions. Seven individuals completed the survey and one response was incomplete. Three respondents opted for an interview of eight additional questions. Survey answers and interviews were coded using frequency counts which then formed topic groups or themes. From the survey, it becomes clear Speech-Language Pathologists enjoy seeing progress of clients, but have a long list of frustrations about the work. Interview themes focused most on a gap between what is taught in graduate school and how to apply those teachings with a client. Further research is needed to fully understand why individuals become Speech-Language Pathologists and to delve deeper into why clinicians continue to stay or take indefinite leave.



# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Physical sciences

**Student Name:** M'zondwase Mumba

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**Faculty Advisor:** Robert Elliot

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**Title:** What Makes Aviation Fuel What It Is?

### **Abstract:**

To inform and make awareness of aviation fuel formation and emission effects. There are many elements involved during the formation of aviation fuel that are never given attention. The importance of these elements is the reason why we still fly and their perfection is worth looking at. The great composition of elements in the fuel are some things that are commonly overlooked.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Physical sciences

**Student Name:** M'zondwase Mumba

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**Faculty Advisor:** Robert Elliot

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**Title:** Aviation Development Comparing Two Countries In Africa

**Abstract:**

Similarities and Differences

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Business

**Student Name:** Brian Oliver

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**Faculty Advisor:** Dr. Matthew Haney

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**Title:** Keeping Church Volunteers Happy: Preventing Volunteer Burnout In The Church

### **Abstract:**

Volunteers are essential to the mission of any church. Therefore, volunteer burnout, and its prevention, is of utmost concern for every church. While there is an abundance of scholarly literature on the issue of volunteer burnout, particularly in the human service section, there is very little scholarly literature which address volunteer burnout in churches specifically, despite the fact that churches and other religious organizations form a very large block of the volunteer sector.

This study will seek to apply the available literature and data on volunteer burnout to the church context and to offer insights into burnout prevention through the application of proper recruiting and screening and transformational/servant leadership techniques.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Biological Sciences

**Student Name:** Trysha Parker

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**Faculty Advisor:** Dr. Kerriann Marden

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**Title:** Effects of Carnivore Activity on Lagomorphs

### **Abstract:**

The purpose of this study was to determine which carnivorous species, *Lynx rufus*, *Canis lupus*, or *Hyaenidae*, was the most destructive in prey consumption. Each species was fed two Lagomorphs a week. Observation of the feeding process was taken to determine the manner in which the species consumed the Lagomorph (where they swallowed whole, torn apart, which limbs were consumed first). The uneaten remains were collected and analyzed for fragmentation and bite mark patterns. Each Lagomorph was weighed before consumption, and the leftover remains not consumed were collected and weighed. The scat of each animal was collected and flotation was used to remove bone fragments. The fragments were weighed and analyzed to determine bone puncture/bite mark frequency and patterns. To determine the amount of destruction by each species, the weight of the Lagomorph remains were subtracted from the weight of the whole Lagomorph. The total bite marks found for each lagomorph were also compared by species. Results and conclusion are pending analysis at this time. This research is beneficial to both archaeology and forensics. Knowing the amount of destruction a species has on their prey is useful in determining how much of the prey is missing, and therefore, how much of your evidence (archeological or forensic) is missing.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Biological Sciences

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Vinicius Ortega Berno

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**Title:** 20 Years Of Herping: An Updated Visual Representation Of The Diversity Of Herpetofauna In New Mexico

### Abstract:

In general, the average person does not correlate New Mexico (NM) as having species rich herpetofauna. However, in the state of NM there are approximately 123 species of known reptiles and amphibians distributed across 33 counties. The last publication on herpetofaunal diversity per county was published 20 years ago by Degenhardt et al. (1996). In this study, we updated the known county records for reptiles and amphibians in NM by reviewing every issue of Herpetological Review in the past 20 years. There was a total of 107 new county records since 1996. Lincoln and Otero counties had the most new county records while Bernalillo and Colfax counties had no new county records. Today, the number of species per county ranges from 23 (Taos Co.) to 85 (Hidalgo Co.), with a mean of 49.3. We visually represented the total number of species per county and total number of species per county per unit area. By using ArcGIS tools, we created thematic maps that represent species rich and species poor counties. We found that the southwestern region of the state remains the most species rich herpetofaunal region. Visual interpretation of the data can serve as a useful tool for management agencies, conservation strategies, but can also uncover the potentially under-surveyed counties of New Mexico. Our future research will focus on correlating species richness with specific ecoregions and management practices within the county (i.e., land use data).

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Business

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**Title:** Minorities In Television Advertisements

### **Abstract:**

Over the years, racial bias has significantly been reduced amongst society. Whether it be in a social setting, or via technology such as social media, racial bias is considered a non-issue among many demographics. However, television commercials and how minorities are portrayed is an area of equality that is still considered to be unequal. Currently, racial bias is realized on daily basis across different television networks and their primarily targeted demographic. The available literature pertaining to racial inequality is outdated and this study will bridge the gap of outdated research and provide a current understanding of the racial inequality in todays society. This research will offer an explanation as to the differences between the portrayal of minorities in television commercials as opposed to non-minorities and offer an understanding on how racial bias has changed over the past 50 years.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Corey Poe

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**Title:** Body Language. Do You Understand It?

### Abstract:

Language contains several different aspects: within those aspects are spoken language, facial expression, and body language. When communicating with someone in a natural environment, one will use all of these aspects to convey their meaning. This study will look into body language and perception. Does audio impact the categorization of body language? If so, what types of body language contribute to the categorization? Does body language impact viewer's perception? These are the questions in which this study anticipates to answer. The methods utilized for this research was to create a survey with a short video including a small group of people interacting, with and without audio. The subjects were then asked if they were able to understand the message being conveyed by the body language. A Mann-Whitney  $U$  was used to determine if there was statistical significance between the mean scores of the video with audio and the video without audio. The conclusion from this research found that body language does carry important information about interactions no matter if audio is involved. Also, some body language is routinely understood while other body language is misinterpreted.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Amanda Pullen

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**Title:** Expressive Prosody in a Client with Autism: A Receptive Approach

### Abstract:

A disordered use of rhythm, stress, and intonation leads to a speech pattern that calls attention to itself. An inappropriate use of prosody is seen in individuals diagnosed with autism spectrum disorder (ASD), and may be a persistent communicative impairment when other impairments have been addressed. The resulting breakdown may affect receptive and expressive communication, leading to misinterpretation and communicative failures that negatively impact the individual's quality of life. This single-subject withdrawal study aimed to determine if treatment addressing receptive prosody would improve the expressive prosody skills of a high-functioning young adult client with ASD. The Profiling Elements of Prosody-Communication (PEPS-C) assessment was used for pre-test and post-test measures of gain, with treatment sessions lasting twenty minutes completed five times per week over 6 weeks. Results indicated that while sentence-level tasks over the course of the study did not show improvement, there were significant gains in word-level tasks on the PEPS-C from the pretest to posttest assessment. Speech naturalness ratings gathered from recordings of the client before and after the first treatment phase were significantly higher post-treatment. Acoustic data was analyzed using PRAAT software, and showed a significantly wider pitch range as well as significantly faster rate of speech for some areas of prosody after the first phase of treatment. While the results of this treatment for this particular client were relatively inconclusive, this approach may still be useful for other clients that exhibit inappropriate prosody and merits further investigation.



# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Business

**Student Name:** Di Qing

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**Faculty Advisor:** Dr. Matt Haney

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**Title:** The Motivation To Use The Facebook And Twitter

### **Abstract:**

With the constant evolution of technology in today's world, the use of social media in everyday life has grown by leaps and bounds (Ellison, 2007). Social media sites such as Google+, Tumblr, Facebook, Twitter, and the like allow individuals to share information instantaneously (Hargittai, 2007). The motivation of individuals to use social media has been highly published. However, motivations of businesses to implement Facebook and Twitter have not been described in great detail. The aim of this study is to offer a firm understanding of how financial businesses can successfully implement the daily use of social media to benefit their customer and broaden their marketing outreach efforts. Through the use of content analysis, this study will provide a framework that managers can use to launch a successful social media platform that can be used on a daily basis.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Agriculture

**Student Name:** Heidy Ramirez

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**Title:** Effects of fluorescent light pollution on early vegetable plant growth

### Abstract:

Fluorescent lighting has been used as a controlled source of lighting when not enough sunlight is available to sustain plant growth. Studies show that outdoor plants have been negatively impacted by fluorescent lights such as street lights. This study will focus on the effect of fluorescent light pollution on vegetables grown in a greenhouse where there is a controlled temperature, water source as well as humidity.

The effect of fluorescent light on the plant growth will be recorded by millimeters per week. Two plant groups will determine the effect of light pollution on vegetables. One group will be kept under fluorescent lighting for a full 24 hours. The amount of produce will be weighed per gram. Both groups will be compared to one another.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

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**Title:** Identifying Differences in Auditory Learning Skills between Gender

### Abstract:

How men and women retain information has been suggested to be different when comparing different modes of delivery (i.e., auditory, visual, and kinesthetic). This study specifically focuses on the short and long term memory retention differences between gender given visual and auditory stimuli. To measure memory the California Verbal Learning Test II (CLVT-II) short was used in its original form to record long term and short term memory given auditory stimuli. Participants randomly assigned to partake in this method are considered as the non-treatment group. The control group received visual presentation of the words used within the CLVT-II in addition to the auditory presentation. Participants used within the study met the minimum qualifications: between 18-60 years of age, had minimum of one year college education, and whose first language was English. Upon selection and random assignment, testing was administered and scored by the author of this research. Raw scores were recorded on the following areas: short term memory, long term memory, short term with cues, and long term with cues. The results indicated there was an increase in retention within those who received treatment when compared to those who received solely auditory stimuli; however, there was no significant difference between those males and females in the control and treatment groups, either within or between genders. Results found within the study do not support the hypothesis that there would be a difference in learning styles based on gender.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Jessica Roberson

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**Faculty Advisor:** Dr. Suzanne Swift

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**Title:** A Survey of Practicum Satisfaction

### **Abstract:**

Programs that are responsible for educating students of communicative disorders will benefit from information gathered from students on how satisfied they are with their practicum experience. As there is a lack of research in the field of practicum satisfaction among graduate students of communicative disorders, information presented in the study will allow university programs to understand the factors that are correlated with a satisfying practicum experience for students. The present study surveyed graduate students of communicative disorders regarding their practicum satisfaction via an online survey. The result of the study did not reveal strong correlations between practicum satisfaction and caseload, hours per week at the practicum setting, rotation or age, although, a trend of negative correlations was observed in the data which indicated that respondents reported higher satisfaction with their practicum experience when provided with a lower caseload and fewer hours per week at the practicum site. The results of the study are important as they describe the graduate student's current perspective and satisfaction with their educational experience. Based on the present study, graduate programs could increase satisfaction ratings by placing a cap on the number of clients and the hours per week a student spends at the practicum site. The field would benefit from further research dedicated to other facets of practicum education, such as effective supervision styles that are conducive to student learning.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Rebecca Roberts

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**Faculty Advisor:** Dr. Karen Copple

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**Title:** AAC: Implementation and SLP Perspectives on Education and Training

### Abstract:

The purpose of this study was to investigate factors that correlated with the implementation of an augmentative and alternative communication (AAC) device in an educational setting. This study examined factors that contribute to the use of the AAC device, including: settings, support, device characteristics, and communication partners. This study also investigated the perspectives of speech-language pathologists (SLPs) on preparedness to work with AAC devices in the field, as well as the continuing educational resources available. Results indicated a weak, positive association between device characteristics of familiarity and appearance. It was found 55% of SLPs felt ill-prepared by graduate programs to work with AAC devices, although there were mostly positive views towards continuing education sources. Suggestions to improve education and training available were analyzed for trends.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Business

**Student Name:** Chase Sambrano

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**Faculty Advisor:** Dr. Matthew Haney

**Email:** Matthew.Haney@enmu.edu

**Title:** The True Cost Of Riding The Lift

### **Abstract:**

Ski lift ticket pricing entails more than just the ride up the mountain. This price is inclusive of only a fraction of the facets needed to run an efficient ski resort or ski area (Cowen, 1991). Most avid skiers and snowboarders have invested hundreds, if not thousands in the equipment necessary to take part in this winter sport (Hennessey, 2002). The remaining and expansive costs incurred to skiers and snowboarders is realized in the lift ticket price, which enables the entry and exploration of the skiable mountain (Tait, 2002). Currently there is few academic articles pertaining and outlining what expenses the cost of the lift ticket covers for the operation (Cowen, 1991). This research will bridge the gap between how skiers and snowboarders see the fee and what the fee actually allows visitors to experience.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Biological Sciences

**Student Name:** Leslie Sanford

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**Faculty Advisor:** Dr. Varela

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**Title:** Antibacterial Effects Of Coffee Bioactive Compounds On Multi-Drug Resistant Bacteria

### **Abstract:**

Many bioactive compounds in roasted coffee, including caffeine, tannic acid, and melanoidin, have been individually shown to have antimicrobial properties. The objective of this research project is to assess the effectiveness of these compounds when combined with antibiotics. Because multidrug resistance is increasingly prevalent among pathogenic bacteria, it is imperative that we find ways to increase the effectiveness of known medicines in addition to synthesizing new ones. The hypothesis is that coffee bioactive compounds that exhibit microbial tendencies by themselves will increase the effectiveness of antibiotics on bacteria that have developed resistance to them by either inhibiting the cell wall, or inhibiting the efflux pumps such that they are not able to rid the cell of the drug as readily. Preliminary data show that the minimum inhibitory concentration (MIC) of tannic acid is approximately 250 µg/mL towards multi-drug resistant bacteria, confirming an antibacterial role for this bioactive coffee agent upon potentially pathogenic bacteria. Future work will focus on measuring the synergistic potential of coffee compounds and antibiotic agents.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Biological Sciences

**Student Name:** Molly Schneiderman

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**Faculty Advisor:** Matthew Barlow

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**Title:** Brachial Artery Conductance During Dynamic Handgrip In Women With Metabolic Syndrome

### **Abstract:**

Overweight and Diabetic conditions have been linked with insulin resistance, endothelial dysfunction and development of cardiovascular disease. In healthy pre-menopausal women, estrogen is reported to have a facilitating effect in maintaining increased vascular conductance while progesterone has a potentially antagonistic effect as observed in other studies including our previous lab work by Restaino et al. The aims of this study are to determine whether or not there is an attenuated endothelial dysfunction in the Metabolic Syndrome (MetSyn) population of young women greater than previously reported pre-menopausal overweight and control women. Additionally our goal was to determine the degree of associated endothelial and metabolically compromised dysfunction in this group that would provide evidence to why a vascular dysfunction may be present. We hypothesize that the vascular conductance in the brachial artery during dynamic handgrip exercise will be decreased in the MetSyn group compared to the control and previously reported overweight population when matched for workload. Methods: In this study, 22 participants (5 MetSyn, 9 Overweight, and 8 Control) performed the procedure of graded handgrip exercise on a dynamic handgrip device while beat-to-beat blood pressure (CNAP finger plethysmography) and brachial blood flow with Doppler ultrasound and B-mode imaging (GE Vivid E with 6 MHz linear prober) were measure continuously. During this exercise, participants use a handgrip dynameter at a cadence of 30 contractions/minute until task failure. At rest and immediately upon task failure, a venipuncture was performed to take peak NO levels as measured by a Colorimetric Nitrate/Nitrite commercial ELISA kit.



# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communications

**Student Name:** Sydney Shilling

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**Faculty Advisor:** Chad Painter

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**Title:** This Just In: A Breaking News Timeline Of Donald Trump's Presidential Campaign

### **Abstract:**

This project closely follows Donald Trump's presidential campaign from the first of March to the first of April. I analyze the credibility of the source and the type of source based on the guidelines set in *Blur: How to Know What's True in the Age of Information Overload* by Bill Kovach and Tom Rosensteil. Looking closely at the time the news was released, who released it, and how factual the information is, I will compare and contrast stories specifically about presidential candidate Donald Trump.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Education

**Student Name:** Michael Skolnick

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**Faculty Advisor:** Matthew Haney

**Email:** Matthew.Haney@enmu.edu

**Title:** Motivating A Heard Of Cats: A Study Of Youth Athletic Coaching

### **Abstract:**

At a very young age, youth become different types of participants in organized sports due largely to the influence of adult leaders and coaches. The type of player the youth becomes can determine the length of time the youth decides to participate in sports. This study will analyze some of the most commonly used methods of motivating young team athletics and offer a successful comprehensive coaching and parenting approach for future use. This study includes secondary data from several studies of youth between the ages of 5 and 12 years old. Coaching styles that de-emphasis winning and focus on enjoyment and personal improvement is a key driver for keeping youth involved in sports. The result of the data used will show that a positive approach to coaching has a direct result on the continuation of playing into young adulthood and possibly throughout life.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Molly Smith

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**Faculty Advisor:** Dr. Adrienne Bratcher

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**Title:** Empowering Through Awareness

### **Abstract:**

Educational resources for family members and loved ones of people with aphasia are an important factor in their well-being. While the need of this information is recognized, there is very little empirical evidence about the effectiveness of specific resources. The primary objective of this study is to assess the effectiveness of "It's Still Me", an educational DVD on aphasia for family members and their loved ones. Participants in both groups completed an aphasia resource questionnaire before and after previewing the guide. There was significant difference in knowledge, confidence, and satisfaction levels of family members and friends of people with aphasia. This simple guide to aphasia resulted in significant improvement in all areas assessed. The DVD would make a valuable contribution in family member and caregiver education of information about aphasia.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Lindsay Snyder

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**Faculty Advisor:** Dr. Karen Copple

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**Title:** The Effectiveness of Assistive Technology in Young Children with Autism Spectrum Disorder

### **Abstract:**

Using a single subject design, this study explored the effectiveness of iPad tablets when compared to symbolic play for teaching vocabulary acquisition to school age children with Autism Spectrum Disorder. The iPad was chosen as it allows manipulation and personalization to fit the individual child's needs. Miniature objects were selected to incorporate symbolic play. Both iPad and Miniature objects did show a progression in vocabulary acquisition; however, with a 95% confidence interval results failed to be significant statistically. Limitations of the study and future research suggestions have been discussed.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Megan Thibodeau

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**Faculty Advisor:** Dr. Suzanne Swift

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**Title:** Researching the Stereotype: Do Gifted Students Have Significantly Different Social Skills?

### **Abstract:**

Deficits in social pragmatic skills have been noted in the literature across various academic and peer groups. Specifically, gifted students have been reported to have lower self-concept and higher difficulty with social skills than their non-gifted peers. This study explores the pragmatic social skills of gifted students compared to their non-gifted peers. An informal pragmatic social skill assessment was given to six classrooms, grades third through fifth gifted and general education classes. Two-way ANOVAs were used to analyze the data. As a whole, the gifted students scored significantly higher than the non-gifted students. These findings do not support the current literature base, but do show that gifted students understand social pragmatics on paper. Further research should focus on social pragmatics skills during real life situations.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Eleanor Tibbetts

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**Faculty Advisor:** Dr. Adrienne Bratcher

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**Title:** Taking Accent Out of Context

### **Abstract:**

This study examines how semantic context affects the perception of foreign accent in native listeners of English. In this study, 3 speakers with a high proficiency in American English and varying accents were asked to read passages that varied in semantic meaning. There were statements with the most semantic context (true/false statements), statements with semantic meaning, and statements with the least semantic context (semantically anomalous statements). These speakers were recorded and were rated by 92 monolingual, American English speaking adults. The listeners rated the speakers on both accentedness and comprehensibility. Intelligibility was also measured orthographically. An analysis of variance revealed significance on all levels of semantic contexts on all three dependent variables. Results indicate that using in semantic context may make foreign speakers of English sound more native-like, increase intelligibility and comprehensibility. Results of this study should be interpreted cautiously due to limitations of the study.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Math/Computer Science/EET

**Student Name:** Mike Urioste

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**Faculty Advisor:** Dr. Brian Pasko

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**Title:** Quad Axis Suspended Camera Carriage

### Abstract:

Our goal for conducting this research project is to find out if we can develop a much simpler and cheaper system that still performs the same task as already developed suspended cameras. Our System will be smaller but will show the proof of concept. Our research began with a set of formulas developed by Dr. Pasko, He developed these formulas to explain the motion of the camera relative to time. The materials used are basic, four 12VDC stepper motors with 200 steps per/rotation. Each motors will need to attach to a stepper motor driver to provide the necessary power requirements. An Arduino Uno microcontroller is what will be used to perform all the calculations and provide motion signals. All four motors will be tethered together in the center and will have to make a combined effort to allow the camera to move along the observation field. The Arduino will be programmed using a C+ variant language in conjuncture with a library called accelstepper. The software gives us the ability to manipulate the speed, acceleration and direction is steps of each motor independently. The purpose of the first phase of the experiment is to familiarize ourselves with the software and to understand how to use the accelstepper library. One motor was attached to the system, the microcontroller was programmed to move the motor at different speeds and accelerations. The next phase of the experiment is to attach two motors together and verify that it can maintain a constant tension along the tether while it moves along its path. It cannot allow the tether to sag or stretch. The Formulas developed by Dr. Pasko have not yet been implemented, until now. In this phase of the research we want to program the microcontroller with these formulas. Our goal in this phase will be to employ the formulas to create four arrays per motor. Each motor will have an array for speed, acceleration, direction and number of steps per interval.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Sciences: Biological

**Student Name:** Raelynn Vigil

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Katrina Estrada

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**Faculty Advisor:** Dr. Matthew Barlow

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**Title:** Ultrasound Assessment Of Flow-Mediated Dilation: Chronic Effects Of Cinnamon Extract And Honey Supplementation

### Abstract:

Cardiovascular disease is the fastest growing pathological diseases in the United States. The primary purpose of the study was to determine the role of oxidative stress and the insulin receptor insensitivity affect in the decline of the dilatory response of the brachial artery in normal, healthy and overweight young participants. This study is designed to determine ways to improve endothelial dysfunction by using a common daily supplement such as honey. Honey is considered to have beneficial aspects such as anti-inflammatory properties, decreases oxidative stress, and improve insulin resistance. The comprehensive goal was to determine the effect of chronic honey supplementation on vascular dilatory responses in the brachial arteries in comparison to cinnamon. This study in continuation with previous work in our lab is aimed to identify if there is a sex difference by comparing male and female participants and measuring their vascular dilatory responses with and without chronic intake of cinnamon or honey supplementation as previous studies from our lab included only young health male participants. We hypothesize that overweight men and women with develop an increased health vascular response with declining oxidative stress and enhancing insulin sensitivity from chronic oral supplementation with honey. We also hypothesize that pure honey supplementation will improve endothelial dysfunction and arterial dilation, as well as improve endothelial NO production. To assess vascular dysfunction we measured flow-mediated dilation of the brachial artery by using Doppler ultrasound, as used in previous studies from our lab. Additionally, we have measured the vascular mechanical compliance through measurement of a Sphygmocor Tonometry of the radial artery.



# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Valentina Veleta

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**Faculty Advisor:** Dr. Theresa Worthington

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**Title:** Reading Comprehension: Traditional Text vs. Electronic Text

### Abstract:

A within-subjects research design was used to study middle school-aged student's reading comprehension when presented with two different text formats, traditional text and electronic text, as well as their preference between the two. Beyond the two reading stimuli being given to the participants in the different text formats, a questionnaire was given to gather information about personal reading preferences and reading habits. Twenty-four middle school-aged participants read from a traditional text via book and from an electronic text via Apple iPad. Two different stories were given to each participant, after randomization, one was read via traditional text and the other via electronic text. Traditional text was compared with electronic text after comparing results of a 10 question multiple-choice comprehension quiz for the two modalities. Results from this study indicated that these two different text presentation modes do not differentially affect reading comprehension. Results of reader preference, according to the questionnaire, revealed that middle school-aged students prefer reading from a traditional text rather than an electronic text.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication

**Student Name:** Taylor Wapaha

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**Faculty Advisor:** Dr. Chad Painter

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**Title:** The Relationship of Knowledge, Influence and Maslow's Hierarchy of Needs in regards to the Media's effect on Individual Development.

### **Abstract:**

This study began in the previous year with research on the relationship between the media, public opinion, and Maslow's hierarchy of needs. After more time and study the media's effects on individual development was found to be directly correlated with public opinion which can also be termed as influence, and human needs as classified in Maslow's hierarchy.

The purpose of this research is to develop and understand a new concept in which the Media's effect on individual development can be compared and contrasted to the relationship of knowledge, influence, and human needs.

In today's society the media is highly relied on and even a necessity in daily human activity. Since the importance of the media is rapidly escalating on a remarkable scale, the research on individual development in this type of culture is incredibly important when such basic human capabilities are involved.

Because communication research mostly takes the form of words, the development of this research is still in conceptual form. Theorizing can be done, but only after real-life tests that produce accurate data.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Kimberly Weindel

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**Faculty Advisor:** Dr. Suzanne Swift

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**Title:** Reading Speed and Reading Comprehension in Advanced Degree Seeking Students

### **Abstract:**

The purpose of this study was to investigate the relationship between reading speed and reading comprehension in advanced degree seeking students. Other factors that were analyzed are background noise, anxiety level, gender, and ethnicity. The hypothesis of this research is that reading rate will have a negative relationship with reading comprehension. 108 participants were asked to reading 2 passages, one with timed and one untimed, after which comprehension questions were asked. Results found there is a positive relationship between reading speed and reading comprehension and some confounding variables may affect this relationship.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Science: Physical

**Student Name:** Brianne Willis

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**Faculty Advisor:** Dr. Basko

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**Title:** Uranium Contamination In Stream Sediment On The Navajo Nation

### **Abstract:**

During the summer of 2015 through an EPSCoR funded STEMAP program, a team of hydrologist Dan Cadol, geochemist Bonnie Frey, grad student Reid Brown, myself, and the other intern Sherwin Becenti, collected soil samples from streams and washes in the Navajo Reservation. We collected these samples to analyze the heavy metal content washing down from upstream abandoned uranium mines. This STEMAP program was funded because these abandoned uranium mines are still a present health and safety risk to those that live in the area, get water from the streams, or farm their animals on land around these mines. Knowing the amount and type of contaminate coming down these washes and streams could help with further clean up in the Navajo Nation. My team and I took these soil samples back to the lab at the New Mexico Bureau of Geology to do further testing on them. After sieving, grinding, and then digesting them in acid, the samples were ran on an ICP-MS for metal content analysis. This machine would give us the data of the element and the amount in each particular soil sample we ran. We also did mass fraction of grain size on each sample to get a course sand content and finer grain content for correlation to the heavy metal concentrations. Our hypothesis being that uranium particle "adhere" to finer grain, silt, or clay material better than course sand. Due to the face that has more pore space and larger surface area. We found that there was more uranium and heavy metal content in the soil samples we took from the washes downstream of the main abandon uranium mines. Our data also told us that our hypothesis is supported by the sample with a high content of finer grained material also held high levels of uranium contamination.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Humanities and Social Sciences: Anthropology

**Student Name:** Layne Wilson

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**Faculty Advisor:** Dr. Stephanie Borios

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**Title:** The Relationship Of The Clovis/Portales Community And Their Local Farmers' Markets: Social Dynamics, Expectations, And The Future Of The Market

### Abstract:

This study reflects on the sociocultural relationship of the Portales/Clovis area with their local farmers' markets. It explores the dynamics of social interactions and encounters fabricated by shopping at local farmers' markets. In this research, interviews were conducted with shoppers and vendors at the local Portales/Clovis markets, to reveal motives for community members interest in their local markets, and what some of the recognized benefits provided by the farmers' markets in these areas. Customer expectations for the market are examined, and predictions for the future of the market are discussed. I originally thought customer's awareness of health and cost were the motivational factors for attendance at rural farmers' markets, however, social interactions and relationship building play a role in the success of participation at the markets.

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Education

**Student Name:** Rachel Worrell

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**Faculty Advisor:** Dr. Dawn Browder

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**Title:** Acquisition of a Second Language: Is it Really a Good Thing for Preschoolers?

### **Abstract:**

Bilingualism is an important topic to research and have knowledge because bilingualism is on the rise due to the increase of immigrants in America. The purpose of this article is to examine what the strengths and weaknesses are of young children being bilingual. According to current research, bilingualism has been shown to provide children with many benefits. To consider bilingualism for their child is a difficult choice. Families think about the benefits and possible consequences, if any. Educators also have things to think about when it comes to having bilingual children in their classrooms. Many people wonder is if it is beneficial to teach children a second language and what the purpose/benefits of this is. Bilingualism depends on the situation. For some families, it is a choice, while for some families, it is a necessity. Educators need to know what to expect, how to help these children and work with the families, so that they, as educators, can better help these children succeed. Various topics concerned with bilingualism are presented: a) myths vs fact, b) different benefits of bilingualism, c) vocabulary development, d) what to expect & supporting bilingual children, e) expectations & findings, f) mixing languages, g) one vs two language, h) relationships with children & families, approaches to learning, i) possibility of language delay, j) questions asked, k) simultaneous & sequential acquisition, l) quantity of early bilingual development.

**Keywords:** Dual Language Learners, bilingual, bilingual children, bilingualism, benefits

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Business

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**Title:** Will a New Chinese Restaurant be Successful in Baltimore?

### **Abstract:**

China's population is known as the largest in the world and Chinese people choose to relocate to the United States every day. As China is the leader in population growth, it is not surprising that Chinese food has seeped into the culture of many different countries, including the United States. There are countless Chinese restaurants in the United States and Baltimore, MD is no exception. This begs the question: Why is Chinese food so popular in Baltimore and will a new Chinese restaurant be successful in this oversaturated market? This study will provide an understanding as to...

# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Anthropology

**Student Name:** Ruijun Xu

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**Faculty Advisor:** Dr. Stephanie Borios

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**Title:** People's Perceptions of Chinese Food in Portales, NM

### **Abstract:**

This paper examines people's perceptions of Chinese food and its authenticity in Portales, NM, as well as compares these results with data collected from Chinese people in China. This work based on the ethnographic research conducted in two Chinese restaurants in Portales. Data were collected through interviews, participation observation and pictures sorting with customers, people who never tried Chinese food, and restaurants' owners and cooks. My results showed that people build their perceptions of Chinese food and what is authentic based on personal experiences. In addition, they defined authenticity at two levels: the food itself, including ingredients, sauce, cooking techniques and how food is presented, including food setting, environment, and culture. As for restaurants' owners and cooks, they do not consider their food as authentic but adaptive to local food preference.



# 42<sup>nd</sup> Annual Student Research Conference

## Poster

**Category:** Communication Disorders

**Student Name:** Grace Zaras

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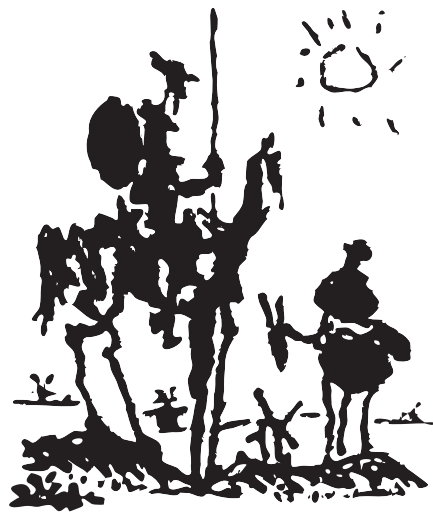
**Faculty Advisor:** Dr. Suzanne Swift

**Email:** Suzanne.Swift@enmu.edu

**Title:** Self-monitoring with Digital Voice Recorder Contributes to Improved Articulation

### Abstract:

The purpose of this single-subject alternating treatment study is to determine the effect of using audio-recorded feedback in the remediation of moderate phoneme errors, specifically the /tr/ phoneme. Previous research indicates that an increase in speech perception leads to greater accuracy of sound production. It was hypothesized that self-recorded vocal productions of the /tr/ phoneme via a digital voice recorder will lead to higher production accuracy across words, phrases, sentences, and spontaneous speech. A 10-year 9-month old male who exhibited moderate errors on the /r/ phoneme, exclusively the /tr/ blend, participated in 15 sessions of traditional therapy and 15 sessions of traditional therapy with the addition of a digital voice recorder. Results from a one-way repeated measures analysis of variance indicated that production accuracy was significantly higher in the posttest. A separate one-way repeated measures analysis of variance suggested production accuracy in treatment phases with the recorder were significantly higher than production accuracy in traditional therapy only. Visual analysis revealed that frequency of self-corrections also increased in treatment phases with the recorder. Results imply positive outcomes of using self-recorded vocal feedback in conjunction with traditional methods for articulation intervention.



*Dream an Impossible Dream*

### **The Student Research Conference**

The Student Research Conference was started with a small grant from the ENMU chapter of Sigma Xi, The Scientific Research Society. The Conference has also been supported by Phi Kappa Phi.

The first ENMU Student Research Conference was held in 1974 for the science programs. The results were so encouraging that the following year the conference was opened to all disciplines. After some years, students from other universities were also allowed to compete. Dr. Ram Sharma served as the first research conference director and continued to chair the conference for 25 years. Dr. Anthony Schroeder subsequently assumed director responsibilities in 1999 and served for 10 years. Upon Dr. Schroeder's retirement from the university in 2009, Dr. David Hemley and Dr. Suzanne Swift have served as co-chairs of the Student Research Conference.